

REMARKS

In the November 29, 2005, Office Action, the U.S. Patent and Trademark Office (hereinafter the "Office") rejected Claims 1-25 under 35 U.S.C. § 102(b) as being unpatentable in view of the teachings of U.S. Patent No. 6,184,803 (hereinafter "Burrell, IV"). Claims 14-25 were objected to because of a typographical error. Claim 14 has been amended to correct this typographical error; and, thus, applicants respectfully request the withdrawal of the objection.

Prior to discussing in detail why applicants believe that all of the claims in this application are allowable, a brief description of applicants' invention and brief description of the teachings of the applied reference are provided. The following discussions of the disclosed embodiments of applicants' invention and the teachings of the applied reference are not provided to define the scope or interpretation of any of the claims of this application. Instead, such discussions are provided to help the Office better appreciate important claim distinctions discussed thereafter.

Background

Prior software and hardware proposals for entering text using a keypad, in particular, a conventional 12-key keypad, have not been entirely satisfactory. Keypads are commonly used to enter alphanumeric data. Conventional 12-key keypads formed of a four-row by three-column matrix of keys were developed when the telephone system changed from rotary dial to touchtone telephones. Each time the key of a touchtone telephone is depressed, a dual-tone multifrequency (DTMF) signal is generated. The two tones identify the key that was depressed. Originally, conventional 12-key keypads were used to enter numeric data—the integers from 0 to 9—plus the "*" sign and the "#" sign. As the telephone system evolved from a land line system to a cellular telephone system, and as telephone communication evolved from voice communication to data communication, the use of keypads has evolved and changed. Many modern keypads are

used to enter text formed of the letters of the alphabet and symbols as well as numbers. Because the number of letters of many languages, such as the English language, is greater than the number of keys on 12-key keypads, in the past, multiple letters have been associated with selected keys of contemporary 12-key keypads. Multiple depressions of the selected keys in rapid succession result in the entry of a specific letter. For example, the number 2 key of a conventional 12-key keypad includes the letters A, B, C; the number 3 key includes the letters D, E, F, etc. Letters are entered into the memory of a related device, such as a cellular telephone, for example, by rapidly actuating, i.e., depressing and releasing, a particular key the number of times related to the letter. For example, in the case of the number 2 key, one actuation enters the letter A, two rapid actuations enter the letter B, and three rapid actuations enter the letter C. A predetermined interval after the last actuation results in the software that interprets the key presses spacing forward to the next letter position. The # sign key functions as a backspace key and is used to correct text entry errors. Obviously, entering text by the rapid actuation of selected keypad keys is both time consuming and error prone.

Summary of the Claimed Invention

In accordance with this invention, a method form of the invention includes a method for entering text using a keypad that comprises a number of keys fewer than the number of items in the text to be entered. The method comprises detecting the actuation of the keys of the keypad and determining if the detected actuation was created by the actuation of one key or the substantially simultaneous actuation of multiple keys. If the detected key actuation was created by the actuation of one key chosen from a group of "1", "2", "3", "4", "5", "6", "7", "8", "9", "*", "0", and "#", the method allows the entering of the item that is a letter associated with the one key that is respectively chosen from a group of "g", "b", "e", "i", "k", "n", "q", "u", "x", "s", all caps mode, and backspace function. If the detected key actuation was created by the

substantially simultaneous actuation of multiple keys chosen from a group of "1" and "2", "2" and "3", "4" and "5", "5" and "6", "7" and "8", "8" and "9", "*" and "0", "0" and "#", "1" and "4", "2" and "5", "3" and "6", "4" and "7", "5" and "8", "6" and "9", "7" and "*", "8" and "0", and "9" and "#", the method allows the entering of the item that is a letter associated with the multiple keys that is respectively chosen from a group of "a", "d", "j", "m", "t", "w", "z", numerical mode, "h", "c", "f", "p", "l", "o", "r", "v", and "y".

In accordance with further aspects of this invention, in a device containing a keypad formed of a plurality of keys oriented in a row-column matrix, an improvement comprises computer-executable code for detecting the actuation of the keys of the keypad and determining if the detected key actuation was created by the actuation of one key or the substantially simultaneous actuation of two keys. If the detected key actuation is created by the actuation of one key chosen from a group of "1", "2", "3", "4", "5", "6", "7", "8", "9", "*", "0", and "#", the computer-executable code allows the entering of a text item that is a letter associated with the one key that is respectively chosen from a group of "a", "c", "e", "i", "k", "m", "q", "s", "u", "y", all caps mode, and backspace function. If the detected key actuation is created by the substantially simultaneous actuation of two keys chosen from a group of "1" and "2", "2" and "3", "4" and "5", "5" and "6", "7" and "8", "8" and "9", "*" and "0", "0" and "#", "1" and "4", "2" and "5", "3" and "6", "4" and "7", "5" and "8", "6" and "9", "7" and "*", "8" and "0", and "9" and "#", the method allows the entering of a text item that is a letter associated with the two keys that is respectively chosen from a group of "b", "d", "j", "l", "r", "t", "z", numerical mode, "f", "g", "h", "n", "o", "p", "v", "w", and "x".

Summary of Burrell, IV

The system of Burrell, IV focuses on a 12-button telephone keypad for alphanumeric data entry. Burrell, IV describes a method of alphanumeric data entry using short duration or long

duration binary key actuations by a simultaneous coding system and/or sequential coding system for communicating on a standard 12-key push-button telephone keypad. Two binary keys are used for an all capital letter mode or two binary keys for lower-case letter mode, along with three binary keys for an upper-case letter mode, for producing full alphanumeric text, including punctuation, symbols, and control.

The Claims Distinguished

The Office has failed to show, and applicants are unable to find, where the applied reference disclosed the subject matter of the claimed invention. For example, the applied reference fails to teach as recited in Claim 1:

if the detected key actuation was created by the actuation of one key chosen from a group of "1", "2", "3", "4", "5", "6", "7", "8", "9", "*", "0", and "#", entering the item associated with the one key that is respectively chosen from a group of "g", "b", "e", "i", "k", "n", "q", "u", "x", "s", all caps mode, and backspace function; and

if the detected key actuation was created by the substantially simultaneous actuation of multiple keys chosen from a group of "1" and "2", "2" and "3", "4" and "5", "5" and "6", "7" and "8", "8" and "9", "*" and "0", "0" and "#", "1" and "4", "2" and "5", "3" and "6", "4" and "7", "5" and "8", "6" and "9", "7" and "*", "8" and "0", and "9" and "#", entering the item associated with the multiple keys that is respectively chosen from a group of "a", "d", "j", "m", "t", "w", "z", numerical mode, "h", "c", "f", "p", "l", "o", "r", "v", and "y."

The Office has indicated that the pre-amended limitation of Claim 1 can be found in Burrell, IV at Figures 4, 5A, and 5B, and Col. 7, lines 28-46. To fairly understand what Burrell, IV discloses, applicants present the text here in full:

In the telephone industry, it is well known that the depression of any given button on a standard twelve button telephone keypad generates one of twelve pairs of audio tones on the "touch tone" phone, or its digital data counterpart on a digital phone. This invention takes advantage of the

customary arrangement of the markings on the face of the standard push-button telephone keypad. When one button is depressed, it produces the numerical value of the key depressed (except for the left star "*" key and the pound "#" key). When the left star "*" key is depressed once, the phone or apparatus enters a continuous upper-case alphabetic mode to produce the letters of the alphabet or a space. Depressing the key with the desired alphabetical data shown in FIG. 3, in simultaneous combination with or followed by the left star "*" key for the left position data, the middle zero "0" key for the center position data, or the right pound "#" key for the right position data produces the desired alphabetic data, which is shown in FIGS. 5A and 5B. (Emphasis provided.)

There is nothing in this portion of Burrell, IV that discloses the claimed limitation. For example, the claimed invention requires that "if the detected key actuation was created by the actuation of one key chosen from a group of "1", "2", "3", "4", "5", "6", "7", "8", "9", "*", "0", and "#", entering the item that is a letter associated with the one key that is respectively chosen from a group of "g", "b", "e", "i", "k", "n", "q", "u", "x", "s", all caps mode, and backspace function." In contrast, Burrell, IV discloses that "[w]hen one button is depressed, it produces the numerical value of the key depressed." See Burrell, IV at Col. 7, lines 34-37. In order for Burrell, IV to produce a letter, it requires that the star "*" key is the depressed. Figures 5A and 5B of Burrell, IV confirm this conclusion. All the letters in the matrix illustrated by Figures 5A and 5B require that a two-key combination is depressed to produce an alphabetic letter.

Similar to the reasons discussed above, the Office has also failed to show and applicants are unable to find, where the applied reference teaches "if the detected key actuation is created by the actuation of one key chosen from a group of "1", "2", "3", "4", "5", "6", "7", "8", "9", "*", "0", and "#", entering a text item that is a letter associated with the one key that is respectively chosen from a group of "a", "c", "e", "i", "k", "m", "q", "s", "u", "y", all caps mode, and backspace function," as recited in Claim 14. As explained before, none of the cited portions of Burrell, IV discloses a way to generate a letter from a single key press combination.

Because the Office has failed to state a prima facie case of anticipation, the rejection should be withdrawn. Independent Claims 1, 13, and 14 are clearly patentably distinguishable over the applied reference. Claims 2-12 and 15-25 are allowable because they depend from allowable independent claims and because of the additional limitations added by those claims. Consequently, reconsideration and allowance of Claims 1-25 are respectfully requested.

Respectfully submitted,

CHRISTENSEN O'CONNOR
JOHNSON KINDNESS^{PLLC}



D.C. Peter Chu
Registration No. 41,676
Direct Dial No. 206.695.1636

CERTIFICATE OF MAILING

I hereby certify that this correspondence is being deposited with the U.S. Postal Service in a sealed envelope as first class mail with postage thereon fully prepaid and addressed to Mail Stop Amendment, Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450, on the below date.

Date: April 28, 2006

Cindy A. Norton

DPC:pww/clm

LAW OFFICES OF
CHRISTENSEN O'CONNOR JOHNSON KINDNESS^{PLLC}
1420 Fifth Avenue, Suite 2800
Seattle, Washington 98101
206.682.8100